

REPLACEMENT SHEET

PCT/US04/00847 .14082005

**TORQUE-LIMITED ELECTRIC SERVO SYSTEM FOR
DEPLOYING A VEHICLE SNOW CHAIN TRACTION SYSTEM**

ABSTRACT

A single unit of the new deployment system includes a housing to which an electric drive motor is externally mounted. The deployment system for each vehicle requires at least a pair of deployment units: one each for right and left wheels. Each unit includes a reversible electric drive motor having an armature shaft; an intermediate drive shaft; a worm axially affixed to the intermediate drive shaft; an output shaft; a shock damper affixed to the output shaft; a worm gear affixed to the shock damper, the worm gear meshing with the worm, and providing rotational locking for said output shaft; and a deployment arm coupled to the output shaft, the deployment arm having rotatably mounted thereto a friction drive disc, said friction drive disc having peripherally attached thereto a plurality of chain segments. Torque applied to the output shaft by the electric motor is limited either by a spring-loaded clutch axially mounted on the intermediate drive shaft or by a circuit which limits current drawn by the electric drive motor to a preset maximum.